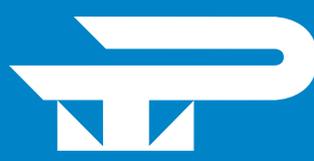


LCS

CLOSING LINES FOR OPEN MOUTH BAGS



 **PAGLIERANI**

LCS closing lines (semi or fully automatic) are suitable for closing preformed open mouth bags.

APPLICATION

CHOOSE FROM THE FOLLOWING OPTIONS, DEPENDING ON THE TYPE OF SEAL REQUIRED:



Single seam (paper, polythene, polypropylene, cotton, jute).



Seam with fold (paper, polythene, polypropylene).



Internal seal with application of a crepe paper cover tape (paper + polythene lining).



Seam with application of heat sealed paper cover tape (paper, or paper + polythene lining, or paper + polypropylene lining).



Seam with application of a crepe paper cover tape (paper).



Seal (polythene).



Folding + gluing (paper or aluminium-coated pinch top bag).



Double folding and hot melt gluing (paper or aluminium-coated material).

AUTOMATION



DEPENDING ON THE SELECTED OPTIONS, THE SYSTEM MAY BE:

SEMI-AUTOMATIC

The operator has to stretch the bag top and guide it between the sealing elements.



FULLY AUTOMATIC

The process is fully automatic and the operator has only to supervise the line.

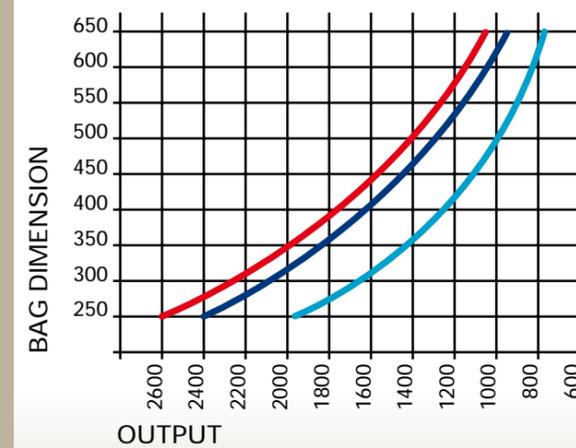
OUTPUT

POSSIBLE PRODUCTION RATES DEPEND STRICTLY ON THE FOLLOWING PARAMETERS:

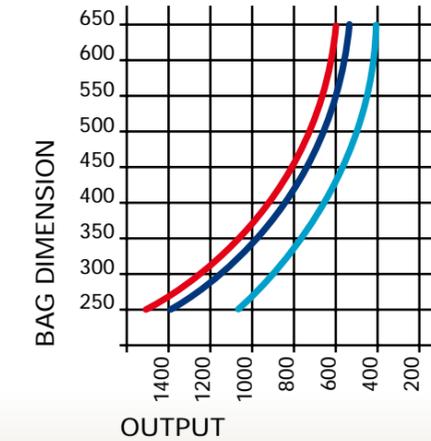
- BAG SIZE (WIDTH)
- SEMI OR FULLY AUTOMATIC VERSION
- STITCHING SPEED

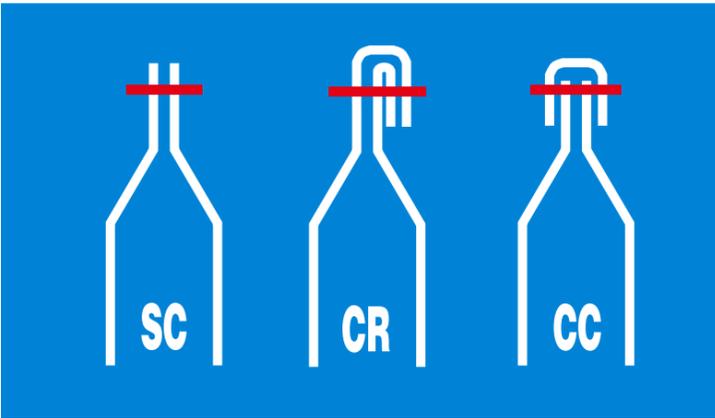
- SPEED: 10 m/min
- SPEED: 14 m/min
- SPEED: 16 m/min

SEMI-AUTOMATIC



AUTOMATIC





From the simplest, economy (semiautomatic) version to a sophisticated (completely automatic) model, by just applying the various options available. Reliable automation is assured by application of the automatic bag aligner, while the type of seam (SC, CR or CC) is determined by the type of dynamic conveyor fitted. In both cases, a conveyor belt transports bags from the filling zone to the stitching zone.

LCS $\frac{SC}{CR}{CC}$ **SA**
SEMI-AUTOMATIC STITCHING.

CONTROL CABINET

STITCHING HEAD

ZONE FOR MANUAL BAG ALIGNMENT

LCS $\frac{SC}{CR}{CC}$ **A**
AUTOMATIC STITCHING.

DYNAMIC CONVEYOR

STITCHING HEAD

CONTROL CABINET

TELESCOPIC SUPPORTING COLUMN

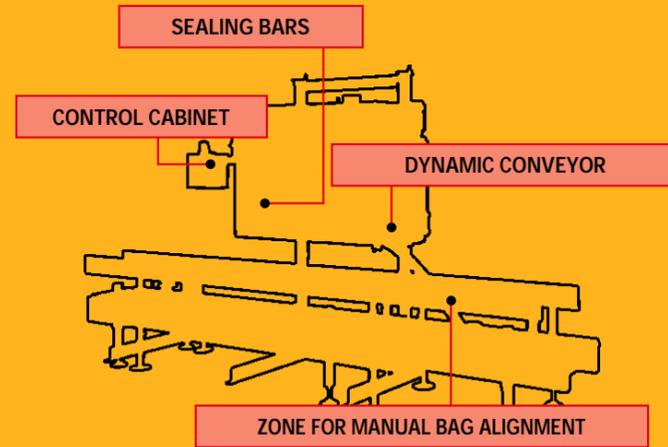
AUTOMATIC BAG TOP ALIGNER



Suitable for polythene bags, the seal is made by pneumatically operated sealing elements with thermostatically controlled heat sealing bars. The bag top is guided through the sealer by the motor-driven dynamic conveyor, which if dust is present is fitted with the “bag inside cleaner” device (to ensure troublefree sealing). The sealing time (duration) and temperature are parameters which can be adjusted as required, depending on the bag material and packing rate. Automation is achieved by fitting the automatic bag top aligner. Full bags are transferred from the filling zone to the sealing zone on a conveyor belt, single length for low packing rates below 200 bags/hour and a dual conveyor for rates over 200 bags/hour.

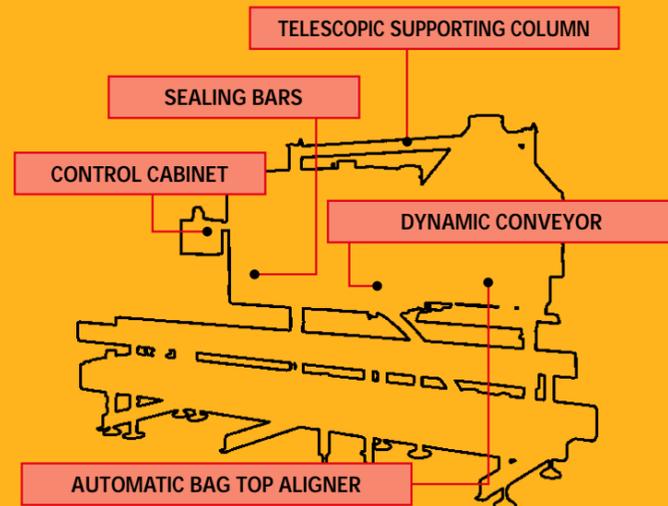
LCS ■ SS/SA

SEMI-AUTOMATIC
SINGLE SEAL.



LCS ■ SS/A

FULLY AUTOMATIC
SINGLE SEAL.

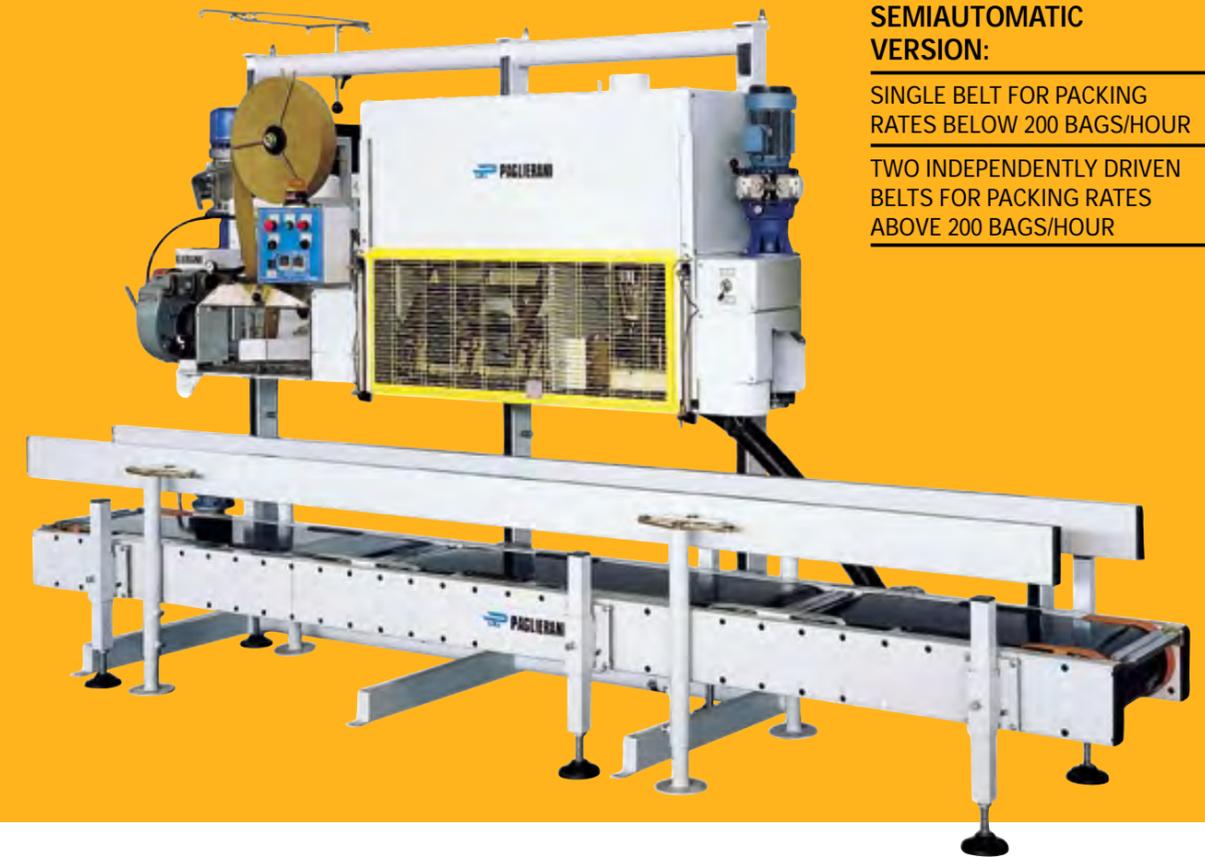
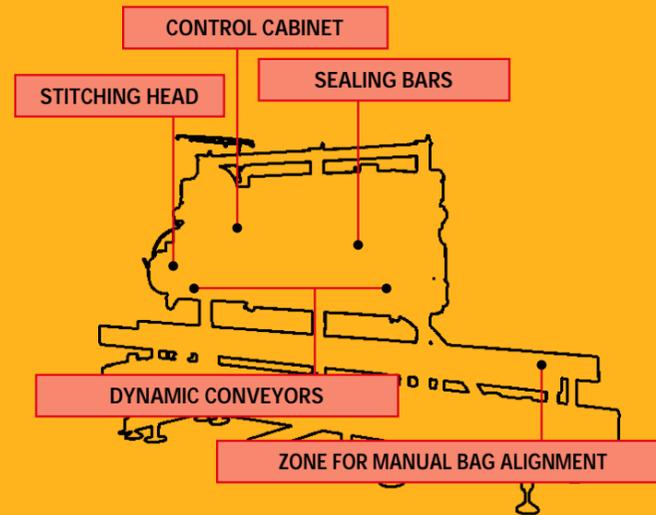




When an airtight seal is required on bags with polythene lining, the SOT version is able to seal the inside and stitch the outside of the bag. Complete automation (operator's presence not required) is achieved by applying the automatic bag aligner. To ensure sealing with powdery products, a device which cleans the inside of the top of the bag is fitted at the infeed to the sealing unit. The bag is transported from the filling zone to the sealing and stitching zone by one belt or more than one, depending on the packing rate and degree of automation.

LCS SOT/SA

SEMI-AUTOMATIC
SEALING + STITCHING.



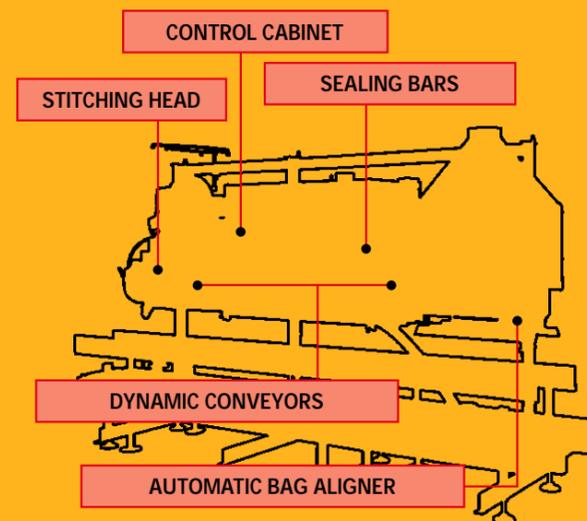
SEMI-AUTOMATIC VERSION:

SINGLE BELT FOR PACKING
RATES BELOW 200 BAGS/HOUR

TWO INDEPENDENTLY DRIVEN
BELTS FOR PACKING RATES
ABOVE 200 BAGS/HOUR

LCS SOT/A

AUTOMATIC
SEALING + STITCHING.

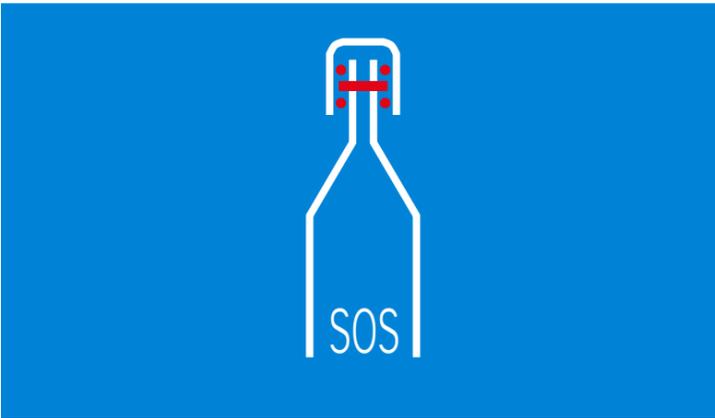


AUTOMATIC VERSION:

TWO BELTS FOR PACKING RATES
BELOW 300 BAGS/HOUR

THREE BELTS FOR PACKING
RATES ABOVE 300 BAGS/HOUR





When there is no polythene lining, an airtight bag seal is obtained using the SOS version; the seam is covered with a heat sealed paper cover strip which prevents air entering through the stitching holes. In the automatic version, the bag aligner is installed at the infeed to the bag top sealing system, in order to ensure that the mouth of the full bag is properly shaped. A series of conveyor belts transfer the full bags from the filling zone to the sealing zone. There are two or three conveyor belts depending on the packing rate of the line and the version (semi or fully automatic), to transport the bags under the various devices in step by step mode.

LCS SOS/SA

SEMI-AUTOMATIC
STITCHING + SEALING.

SEMI-AUTOMATIC VERSION:

SINGLE BELT FOR PACKING RATES BELOW 200 BAGS/HOUR

TWO INDEPENDENTLY DRIVEN BELTS FOR PACKING RATES ABOVE 200 BAGS/HOUR

LCS SOS/A

AUTOMATIC
STITCHING + SEALING.

AUTOMATIC VERSION:

TWO BELTS FOR PACKING RATES BELOW 300 BAGS/HOUR

THREE BELTS FOR PACKING RATES ABOVE 300 BAGS/HOUR

TECHNICAL FEATURES



1 BAG GUIDES

Steel (stainless steel for applications on corrosive products). Adjustable in height and width to suit the bags.



2 DYNAMIC CONVEYOR

A pair of chains guide the top of the bag into the stitching or sealing unit. The chains are driven by variable speed drive for simple, immediate speed adjustment allowing perfect synchronization with the belt and closing device. Depending on the options fitted, this device is able to:

- trim the top edge of the bag
- fold the edge
- apply the crepe paper cover tape.



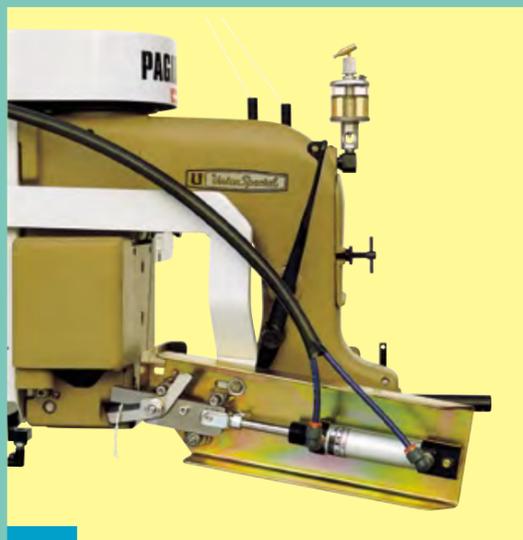
5 STITCHING HEAD

We will recommend a suitable stitching head, manufactured by Fischbein or Union Special, for all types of stitching applications and throughputs.



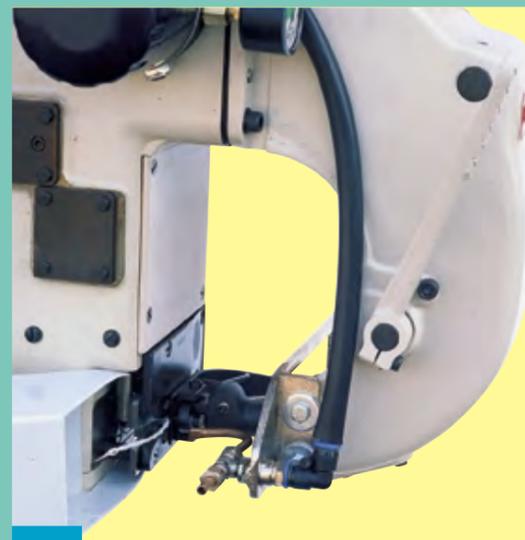
6 SEALING BARS

Bags are sealed by two heated bars, with thermostatically controlled electric elements. Closing is pneumatic. The height and number of the sealing bands can easily be modified (the standard is 2 bands each 7 mm wide). A labyrinth seal is used to extract the air from inside the bag.



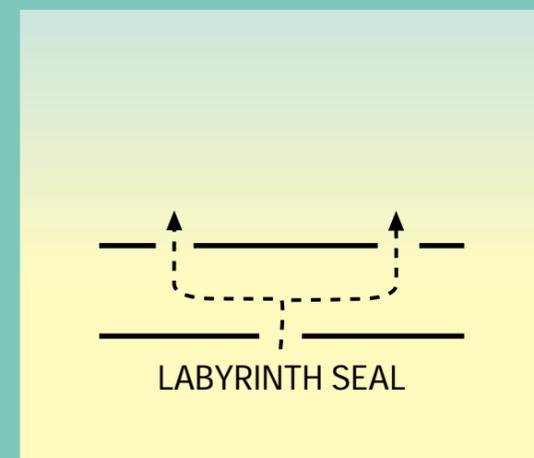
3 THREAD SCISSORS

After stitching, the thread is cut by pneumatic scissors mounted outside the stitching head.



4 BLOW-TYPE THREAD CUTTER

Blow-type thread cutter, the thread is propelled between the cutting knives by an air jet, available as an alternative to the standard scissors.



TECHNICAL FEATURES



7 PT SEALING

When pinch top bags are to be handled, the LCS line is equipped with a system to:
Fold over the top edge (A). The top of the bag, guided by a dynamic chain conveyor, is folded over (with a pneumatically operated guide).
Reactive the glue (B). A bar sealer heated by thermostatically-controlled electric heating elements, with a pneumatically operated closing

movement, reactivates the glue on the edge which has been folded over.
Press and cool the top edge (C). After folding, the edge is pressed and cooled.



9 PNEUMATIC AND ELECTRIC PANEL

Completely airtight, protected and accessible. Built into the rear of the machine, on the opposite side to the sealing system.



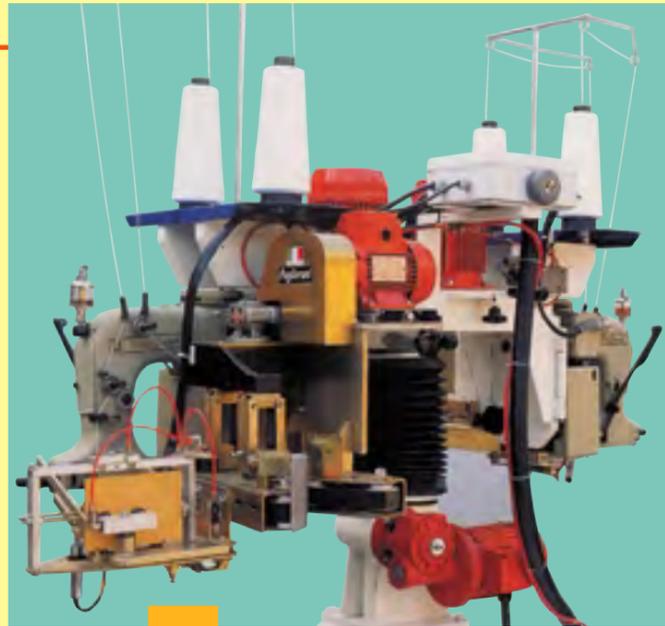
8 DPI SEALING

Conventional paper bags can be sealed using the double fold and glue system. The LCS line is equipped with a system to:
Trim the top to level the edges (A). The top of the bag, guided by a dynamic chain conveyor, is

folded over; the offcut is discarded into a collection container.
Double fold the top edge (B). The top of the bag, guided by a dynamic chain conveyor, is folded twice as it passes through two "propellers".



Apply the hot-melt glue (B). The hot-melt glue is applied using a hot-melt glue spraying device.
Press and cool the top edge (C). After folding, the edge is pressed and cooled by means of a motor-driven belt conveyor.



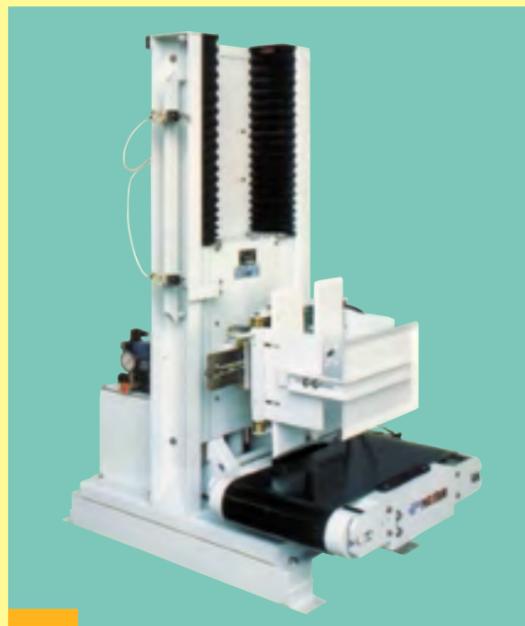
1 REVOLVING COLUMN

For installation on semiautomatic stitching lines. The device supports two stitching heads (one in working position and one in standby) allowing immediate replacement if one head fails.



2 REVERSE FEED HEAD

Stitching heads normally work from right to left, but a special reverse mount allows operation from left to right.



3 LIFT (BAG PICK-UP)

Installed at the sealing line entry point to ensure gentle removal from the filling spout, avoiding dust emissions and guaranteeing that the bag is removed in the correct position. The pneumatically operated bag centering devices take hold of the perimeter of the bag during its removal from the filling spout.

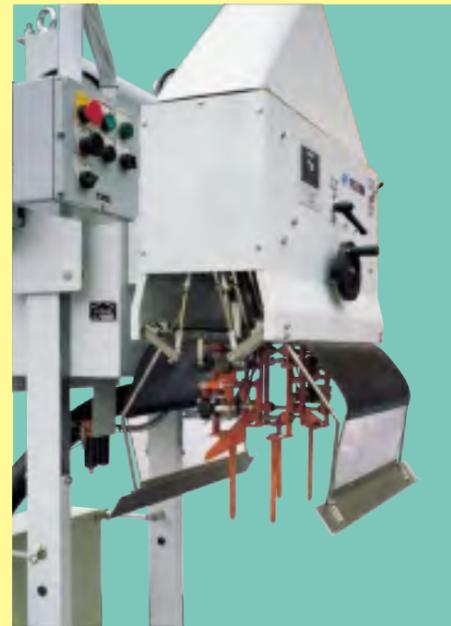


4 FLAT BAG ALIGNER

With this device, bag preparation becomes totally automatic. It can be adjusted to suit the bag width (min. 350 mm - max. 650 mm) using a handwheel. Movements are pneumatic. The device requires a space between the product and the top edge of the bag which can be calculated using the formula:

$$\Delta h = \frac{\text{width of bag when flat mm}}{3,14} + 90$$

OPTIONALS



5 GUSSETED BAG ALIGNER

The system is complete with fingers to re-form the gusset. Packing line speed is limited to 600 bags/hour and 50 mm more space is required at the top of the bag than for flat bags.



6 LABELLING UNIT

The device, suitable for use with pre-printed, ready cut labels, is designed to be combined with the main stitching machine in order to attach labels to the bag mouth. Labels are stored in a special container which holds approximately 600 labels at once. The labels are picked up individually by means of suction cups and transferred to the stitching head on a conveyor belt. The system is both straightforward and reliable.

The following size range of labels can be handled:

- Width min. 150 mm - max. 200 mm
- Height min. 90 mm - max. 150 mm
- Weight min. 100 g/m² - max. 120 g/m²



7 BAG TOP CLEANER FOR HEAT SEALER

When handling powdery products, the cleaning device is used to clean the inside of the bag so that it can be sealed. The mouth of the bag is opened while a blower nozzle enters and cleans it out. The pneumatically operated system includes an extractor which sucks up the dust generated during the operation.

OPTIONALS



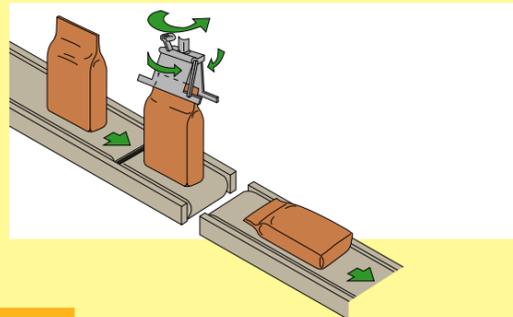
8 THREAD CONTROL

Automatic packing lines can include a system to check for thread breakage (or end of thread), which stops the line if stitching does not take place. A similar device is also adopted for control of crepe paper (in case of CC - SOT - SOS seals).



9 BAG TURNING GRIPPER

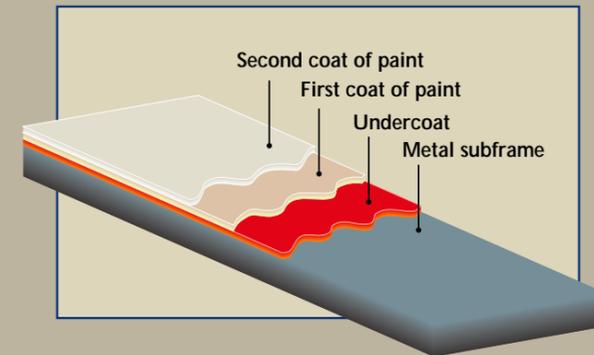
A pneumatically operated gripper can be installed to turn full bags lengthwise in relation to the axis of the conveyor belt. This device grips the top of the bag and turns it 90°.



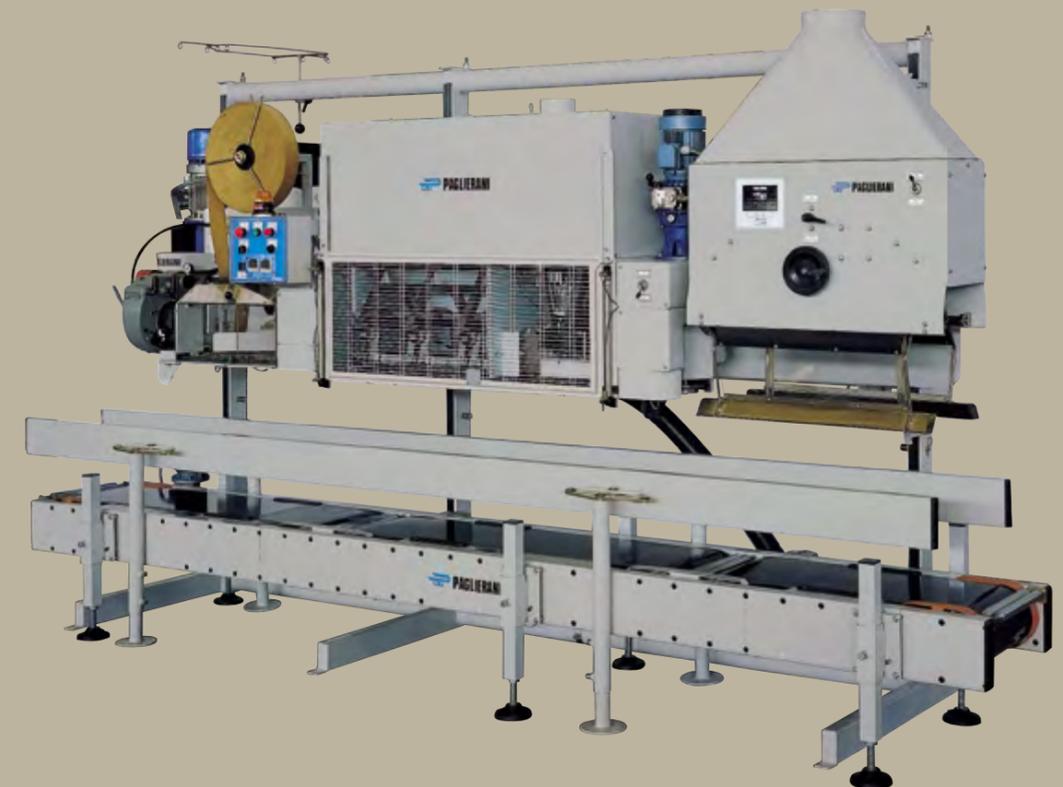
10 FULL BAG TIPPER

The full bag, initially in the vertical position, is removed lengthwise, laying horizontal, thanks to the tipper which changes its position by 90 degrees. More specifically, the bag travels forward (upright) on the motor-driven roller way. The deflector system, with motor-driven belts, is then pneumatically raised and deflects the bag by 90 degrees, tipping it so that its bottom is pointing forward.

AGGRESSIVE ENVIRONMENTS



If the system is to be installed in a corrosive environment, it is treated to minimise corrosion. Most parts are in stainless steel, while elements for which this is not possible are protected with epoxy paint. The metal fasteners used are 304 stainless steel.



LCS sealing lines are manufactured in a strictly controlled mass production process to guarantee product for industrial duty. This production philosophy ensures an excellent quality/price ratio, the immediate availability of

spare parts and a uniform product. Paglierani's objective is a highly engineered, standardized product with consistent quality in every detail.



STITCHING

SEALING

SEALING + STITCHING

STITCHING + SEALING

FOLDING AND GLUING



PAGLIERANI: A LINE COMPOSED OF STRONG POINTS.